



# MAGAZINE

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## CONTENTS

Modern Mechanised Mining, by G. E. Stewart . . . . .	326
News in Pictures . . . . .	332
Modern Marvels—Radar and Radomes, by Robert Wareing . . . . .	338
More Colour in our Churches, by the Editor . . . . .	340
Sporting Parade—T. L. Hunt . . . . .	346
Information Notes:	
Ourselves as Others See Us . . . . .	348
Sir Alexander Looks Ahead . . . . .	351
People and Events . . . . .	352
Christmas Quiz, set by Douglas Murray . . . . .	356
The Great Jam, by Dennis Carey . . . . .	357

FRONT COVER: *Palácio de Pena, Sintra, Portugal,*  
by T. H. Barben (Pharmaceuticals Division)

## OUR CONTRIBUTORS



Dennis Carey is a member of European Department at Head Office and at one time worked as a journalist for Reuter's. He joined the Company in October 1956.



G. E. Stewart retired from the Company last summer after 22 years as Manager of the Billingham Anhydrite Mine. He had, in fact, worked in this mine since its inception in 1928, when he was appointed Assistant Mine Manager after joining Billingham Division two years previously as a construction engineer in charge of sinking the main shaft.

# Modern Mechanised Mining

By G. E. Stewart

Eight hundred feet below ground at Billingham, anhydrite is being won by methods that are as up to date as anywhere. It is a story of higher productivity combined with an end to back-breaking tasks and many fewer accidents.

Illustrated by Arthur Horowicz

IN August 1957, Billingham's anhydrite mine, 800 ft. below the factory site, achieved a long-standing ambition. In that month conversion to 100% mechanical mining was completed after ten years of step-by-step advance. Today, precision drills mounted on long manoeuvrable hydraulic booms bore the rock face for the explosive charge, huge loaders with powerful grabs raise the shattered rock from the floor of the mine, and giant diesel trucks drive their load of stone down wide, cavernous roads to dump it in a deep pit leading to the jaws of an underground crusher.

Over the years of changeover, productivity has moved steadily upwards as miners have been transferred to other jobs in the Division and the £750,000 worth of capital equipment has got into its stride.

All this mechanical equipment needs, of course, a substantial increase in the maintenance strength, but the overall picture is that over a million tons of anhydrite are now being raised annually with only 49% of the total manpower (process and maintenance) that was required in 1947 to raise 825,000 tons.

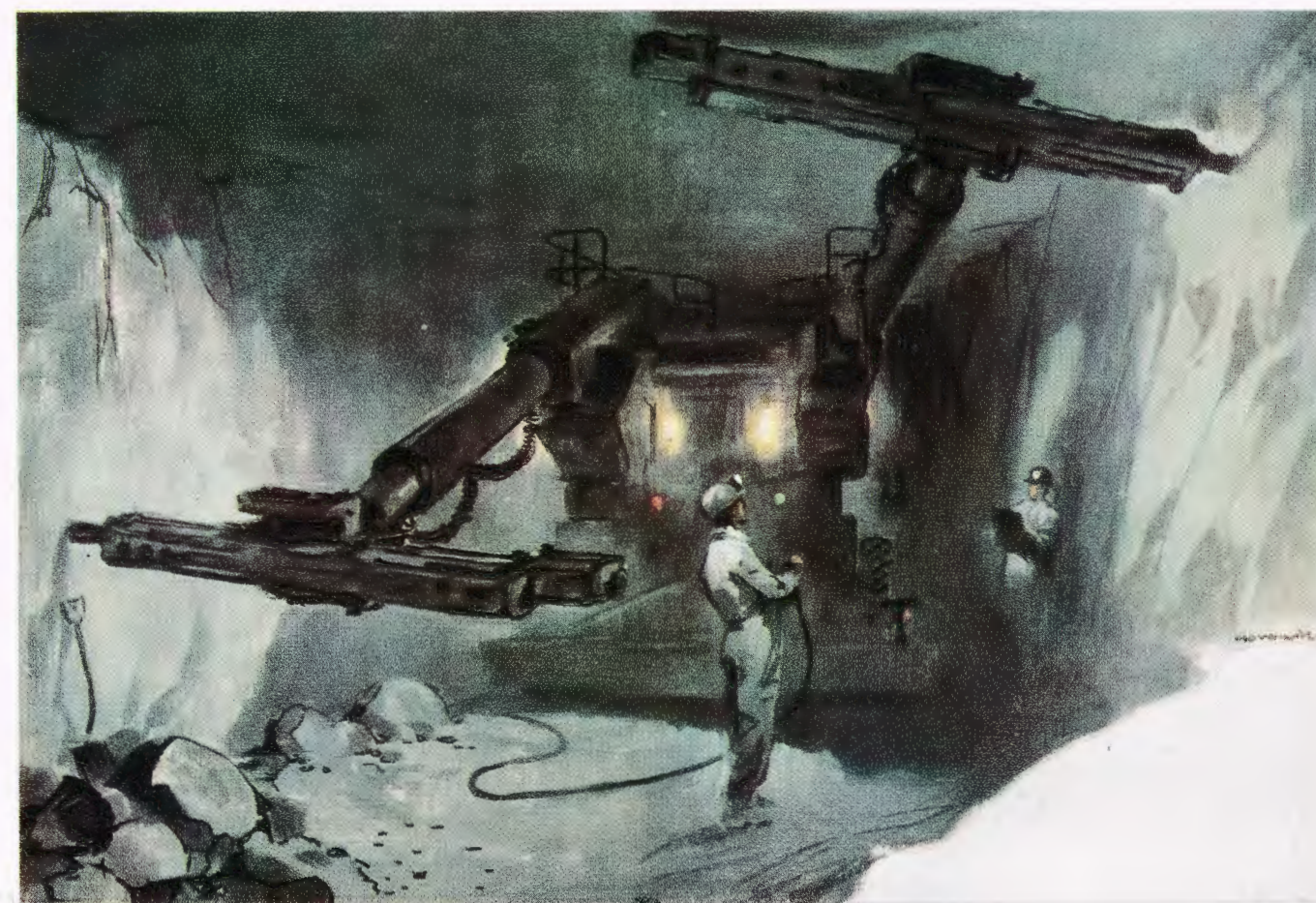
Gone is the back-breaking task of lifting derailed tubs of anhydrite, each weighing 33 cwt., back on the tracks. There is no more humping of heavy drill equipment on the shoulders from place to place, climbing rock benches, or heaving a 90 lb. snatch-block on to a face-bolt.

Gone also are the trapped fingers from coupling and uncoupling over 3000 tubs per day, and the danger of working in the vicinity of lashing wire ropes.

The accident rate has taken a dive for good, so that working in the mine today is as safe as anywhere in the factory. In 1952 the mine beat the factory with a frequency rate of only 0.99 when the whole Division stood at 1.12; and again in 1957 the mine got down to

0.5 when the factory could only achieve a frequency rate of 0.62. Yes, the mine statistics go in with the factory average now, whereas in the old days the rate for the mine was recorded as a thing apart.

There are now no miners left who started in



Drilling shotholes with an electric rotary drill carriage





Loading anhydrite into a dumper truck





Crushing anhydrite in the underground plant



Searching for matches or cigarettes before going underground

January 1928, when the mine began, but still twelve who started later in the same year. Few are left to remember the "beat hands" of those hand-filling days, and the long walks over rough floors underground.

Today the miners walk 50 yards from the cage to a meeting station, whence they ride over to the working face by diesel truck to operate ultra-modern machines—push-button electric rotary drills, self-feed percussive drills on hydraulic booms, 110 h.p. stone loaders, or 150 h.p. diesel trucks carrying 14 tons.

This road haulage system, spectacular because of the very size of the equipment dwarfing the man who handles it, replaces the twin overhead trolley wire locomotive haulage system originally installed in 1932. Now, a locomotive on rails can only haul on easy gradients. Therefore, for the "rise" and "dip" workings, rope haulages of up to 150 h.p., hauling from places 1000 yards away up inclines of up to 1 in 12, were required to feed the arterial locomotive haulage level.

The old workings had an area of a square mile, and half the miners were, of necessity, being used on transport jobs, much of the anhydrite travelling one and a half miles on its way from the face of the shaft. It was transferred over three different haulage systems on the way. The miners themselves had to climb these 1000-yard gradients, often carrying 8 ft. drill steels on their shoulders at the end of a hard shift's work. Thus an increasing proportion of the miner's shift had to be spent in travelling to and from the working faces.

With this situation developing after a mere sixteen years of working, something had to be done to halt

(Continued on page 355)



Firing a round of shots



Meal break in an underground foreman's office





**Ask a policeman.** People are asking London Policeman P.C. Norman Niblo questions about his uniform. On a recent visit to the U.S.A. and Canada under the auspices of the British Travel and Holidays Association, he is pictured in Fifth Avenue, New York, wearing a new 50/50 'Terylene'/wool lightweight uniform jacket made by Tootal, Broadhurst Lee. It is half the weight of the normal summer uniform



**New Research Building.** Our artist's sketch shows the new Paints Division Research Building, now being built at Slough. It shows the north face of the building with the main entrance; Wexham Road will run beyond the picture to the right. On the left is shown the construction of reinforced concrete columns and gives some indication of the depth of the foundations for the new building, which is due to be completed at the end of 1960



**'Terylene'/cotton** is the material chosen for the ceremonial dress of the British Women's Olympic Games team. This is one of the designs seen at the fashion show held at the Dorchester Hotel last month. (See page 353)



**Motor Show.** A group of I.C.I. (Hyde) Limited factory personnel were photographed at the Motor Show with Mr. J. H. McGill, Works Manager (third from right), trying out a Standard Vanguard. The car, exhibited by the Pressed Steel Company, who fabricated the bodywork and trim, won the first prize in a section of the private coachwork competition. The company is a major customer of I.C.I. (Hyde) Limited and Paints Division



**Tough game.** A ladies' soccer match between A.E. & C.I.'s Head Office and Kynoch was recently played at Modderfontein. Play was so fast and furious that the referee had a difficult time keeping pace with the energetic players. Both spectators and players seemed to enjoy themselves immensely



**Visit to Switzerland.** When Sir Alexander Fleck, the Company Chairman, was in Switzerland recently he took the opportunity to lunch with the sales staff of the Swiss Branch of I.C.I. (Export) Ltd. He is seen (centre) with (l.-r.) Mr. N. Buch, Mr. J. E. Hefti, Mr. H. Ammann and Mr. J. P. Müller





**Processional cross.** Mr. E. Halls, a foreman instructor at Wilton Works Training Centre and lay reader at the parish church, thought that Wilton might be able to help in providing a processional cross. Eventually designs and workmanship were carried out by Wilton apprentices, who are seen here providing an escort to Mr. Halls with the cross. The cross is made of brass, and the staff to which it is attached was once a railway shunter's pole



**Novelty trio.** "Tumble Tommy," "Lucky Pig" and the non-slip nail-brush are three brushes made by G. B. Kent & Sons Ltd. They are manufactured from Plastics Division's 'Diakon' in various colours with nylon bristles, and would make welcome gifts for the tree or Christmas stocking



**Cover girl.** Miss Alma Hill (General Chemicals Division) was selected from a number of young hopefuls to appear in the recent television programme "Cover Girl." This is Alma as she appeared on the screen



**Mr. Kevin Howley** (Billingham Division), the first-class referee, had the honour of refereeing the Scotland-Wales international last month. This was his first full international, although he has already refereed a number of important games



**Botton Hall**, not far from Wilton Works, is a village community for mentally handicapped young people. Wilton's link with Botton has in the past been twofold, by the Wilton's Charity Committee supplying a band saw for the joinery shop and 'Terylene' waste, which is shown here, used for stuffing dolls made by the girls. Now more members of Wilton have answered the appeal for the help of craftsmen such as plumbers and electricians



**Mrs. Lillie Lancashire** (Dyestuffs Division) has become the first holder of the United Kingdom Alliance Premier Award, an attractive silver cup for modern ballroom dancing. Similar awards have been made in the past, but only for old-time dancing



**Emergency pipeline.** This series of photographs illustrates stages in the layout of a three-mile emergency polythene pipeline to take water from Fishburn Colliery to Billingham Beck to supplement the factory supply during the recent water shortage. The 16 ft. lengths of 6 in. pipe were moved over farmland on a low loader and joined by special aluminium couplings. A minor road had to be spanned where aluminium "legs" were used, and also a main road over which Engineering Works Services erected a scaffold bridge





**1,000,000 accident-free hours.** The Polythene Works flagpole at Wilton Works from which the Works Safety Flag had flown for half a million accident-free hours, now has an additional adornment of a plaque reading one million hours. Our picture shows part of the plant and publicity posters in connection with the one million hours achieved



**Brother inventors.** Our picture shows Messrs. Ben and Eric Woodley of Billingham Division, who have between them perfected a new addressing machine known as the Adrema single print machine. There are now several of these machines in operation in the Divisions. Some of its most attractive features are no physical effort to the operator, no noise, uniform printing, and a longer life for the embossed plates



**Transformation.** A resident of Gorton decided to brighten up a rather depressing outlook from his living room by using exotic plants and flowers, with cleverly placed lighting. But the door at the end was still a problem. Mr. J. Davies of ICI (Hyde) Limited came to the rescue by offering to do a landscape painting on the door and the wall to complete the transformation scene



**"Thermoplastics in Industry"** was the theme of a recent I.C.I. plastics exhibition in Birmingham. Schoolboys, as well as 600 Midland industrialists, saw nearly 200 different components and articles made from I.C.I.'s plastic



**Treasure ship.** When Sir Alexander Fleck was touring the Far East last year a Tokyo company presented him with this beautiful silver treasure ship—a Takarabune. Sir Alexander has now presented it to Wilton Works for safe keeping, and it was recently on display at the Site Council members' lunch. The Takarabune is a Japanese symbol of a peaceful bringer of wealth and happiness from yonder oceans



**Giant traveller.** The first of the absorption towers for Nobel Division's new intermediate oxidation plant arrived by road at the factory's Police Gate. It travelled on a Sunday by a specially selected route to avoid traffic obstacles. It is hoped that the unit will be commissioned about the middle of next year



**Safety rally.** At Wilton Works Safety Rally Mr. A. T. Mackie (Structural Design Dept.) starts out in his 1937 A.C., on which he has spent about 3000 hours rebuilding



**Pleased to see you.** A bouquet was a nice welcome for Mrs. Gollogly, a supervisor at Piccadilly Restaurant, when she attended the Wilton Chargehands' Association as the first lady member. Mr. J. Durkin (chargehand painter, Bain Works) (second right) presented her with the flowers



## RADAR AND RADOMES

By Robert Wareing

One of the problems of airborne radar is the provision of a suitable radar dome (now called the radome) through which radar signals may be sent and received without distortion. I.C.I. specialises in this line through its subsidiary Marston Excelsior Ltd., and the principles of the radome are here explained.

**H**ISTORICALLY, the use of radio waves for the detection of reflecting surfaces began in 1925 with the experiments of Sir Edward Appleton. Ten years later a British team was set up under Sir Robert Watson-Watt to develop techniques suitable for the detection of enemy aircraft. By September 1939 a chain of radar stations was located along the coasts of Britain. By their aid the approach routes of hostile aircraft were plotted, and our defending forces were suitably disposed to repel them.

The basic principle of radar is that radio-frequency power is sent out in pulses from a suitable transmitter, via a radar aerial, in the general direction of the desired target. When these ultra-short radio waves impinge on the target, part of the energy is reflected from its surface. The reflected waves are dispersed in all directions, but some part of the energy is returned in the direction from which the wave was transmitted.

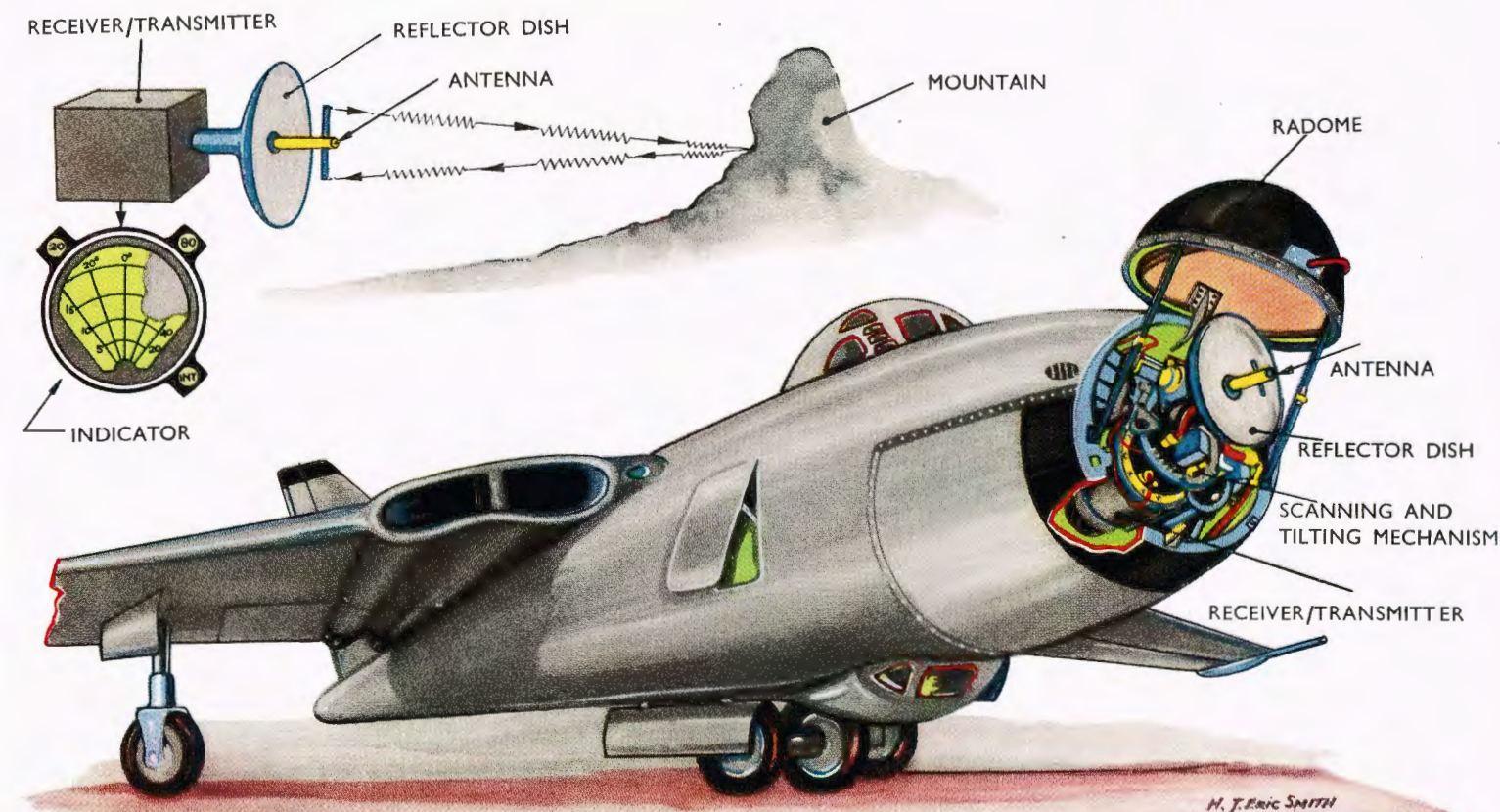
This reflected energy is collected on a receiving aerial beside the transmitter and the pulses are fed into a cathode-ray tube, so that a visual indication of the direc-

tion and distance of the target is obtained. Both aerials can be combined in a single antenna which alternately transmits and receives the reflected wave.

The successful development of airborne radar equipment was achieved during the later stages of World War II, and this was used to give the aircraft crew information on the location of enemy ships and aircraft. It could be used for both offensive and defensive purposes.

One outstanding development was known as H<sub>2</sub>S, a complete map of the ground beneath the aircraft being plotted on the cathode-ray screen. The screen glows faintly when signals are reflected from level ground and more brightly from buildings, while no reflections are received from water, hence the screen remains black. Thus a map of the terrain can be plotted even though the ground may be invisible from the aircraft due to darkness or cloud.

Early airborne radar aerials were fitted to the outside of the aircraft, but as speeds increased it became necessary to house the aerials inside a dome or cowling which could be made transparent to the radar signals. Such housings



are known as "radomes" (an abbreviated form of "radar domes"), and their efficiency can be measured by the extent to which they do not interfere with the pattern of signals sent out by the radar aerial. Such interference could result in a reduction in the range of the equipment or in displacement of the apparent position of the targets.

The aircraft radome is a precision instrument in itself, therefore, and both the thickness and electrical properties of materials used must be matched with the operating wavelength of the radar signal. The designer has great difficulty in reconciling the mechanical and electrical requirements which confront him. The surface of the radome may suffer severe erosion by the impact of rain at high aircraft speed, which limits the materials and shapes which may safely be used. These complex problems involve the techniques of aerodynamics, mechanical engineering, chemistry and electronics, so that radome design has become a very specialised science.

Initially, such radomes were fabricated from 'Perspex,'

which was optically transparent as well as electrically so, but the need for stronger materials turned the attention of the scientists towards the newly developed resin-bonded fibreglass laminates. The production of a prototype radome for the Lincoln bomber was undertaken by Metals Division, and the first British reinforced plastic radome was made at the Wolverhampton factory of Marston Excelsior Ltd. in 1947. Since then some tens of thousands of radomes and aerial covers have been manufactured by Marston's, who have maintained their position as the country's leading supplier.

It is good to see that many peaceful uses for radar have been developed from its military origin. The latest type of radar equipment permits the pilot to observe weather conditions along his flight path as far as 80 miles ahead, thus allowing for the avoidance of turbulent areas with a minimum amount of detouring. The use of aircraft radar and radomes is thereby making a big contribution to Britain's great achievements in the realms of jet travel.





A family coat of arms in York Minster

ENGLAND's churches in the Middle Ages—especially in the later Middle Ages—were great joys to behold, not only for their architectural beauty, but for the wealth of colour inside. By the main service of the morning the sun would be shining in directly through the East Window, throwing different colourful shafts of light on the choir stalls and picking out the liturgical colours of the priests' vestments, the mauve of the canons' capes and the scarlet of the bishop's. Generally, the church was brightly painted, with scenes of Christ's life and passion and the stories of saints. Pillars and tombs, as well as stained glass, featured the heraldic arms of the local noble and merchant families.

Since the war there has been an increasing tendency to return to this more colourful approach in church decoration which withered after the Reformation.

Today there are some really outstandingly lovely churches in which colour has been used most successfully to enhance the architectural beauty. Two churches in particular have been chosen to illustrate this theme—Ripon Minster in Yorkshire and Wren's masterpiece, St. Clement Danes in Fleet Street, London. Both of these churches have been redecorated since the war and in both the same craftsmen were employed to do the actual painting.

Their work has an affinity with the bright colours used in the fifteenth and sixteenth centuries, examples of which survive, although of course much restored, in St. Mary's, Beverley, Yorkshire, and in York Minster.

**The fifteenth-century choir screen at Ripon Minster.** The figures in these 32 niches were installed in 1947 and the colouring has been immensely successful, giving relief to the sombre majesty of the cathedral.

# More Colour in our Churches

By the Editor

Today there is a trend to wards brighter colours in church decoration, a movement in tune with the colourful approach of the Middle Ages.



This group of minstrels facing the pulpit at St. Mary's Beverley, Yorkshire, dates from the fifteenth century.



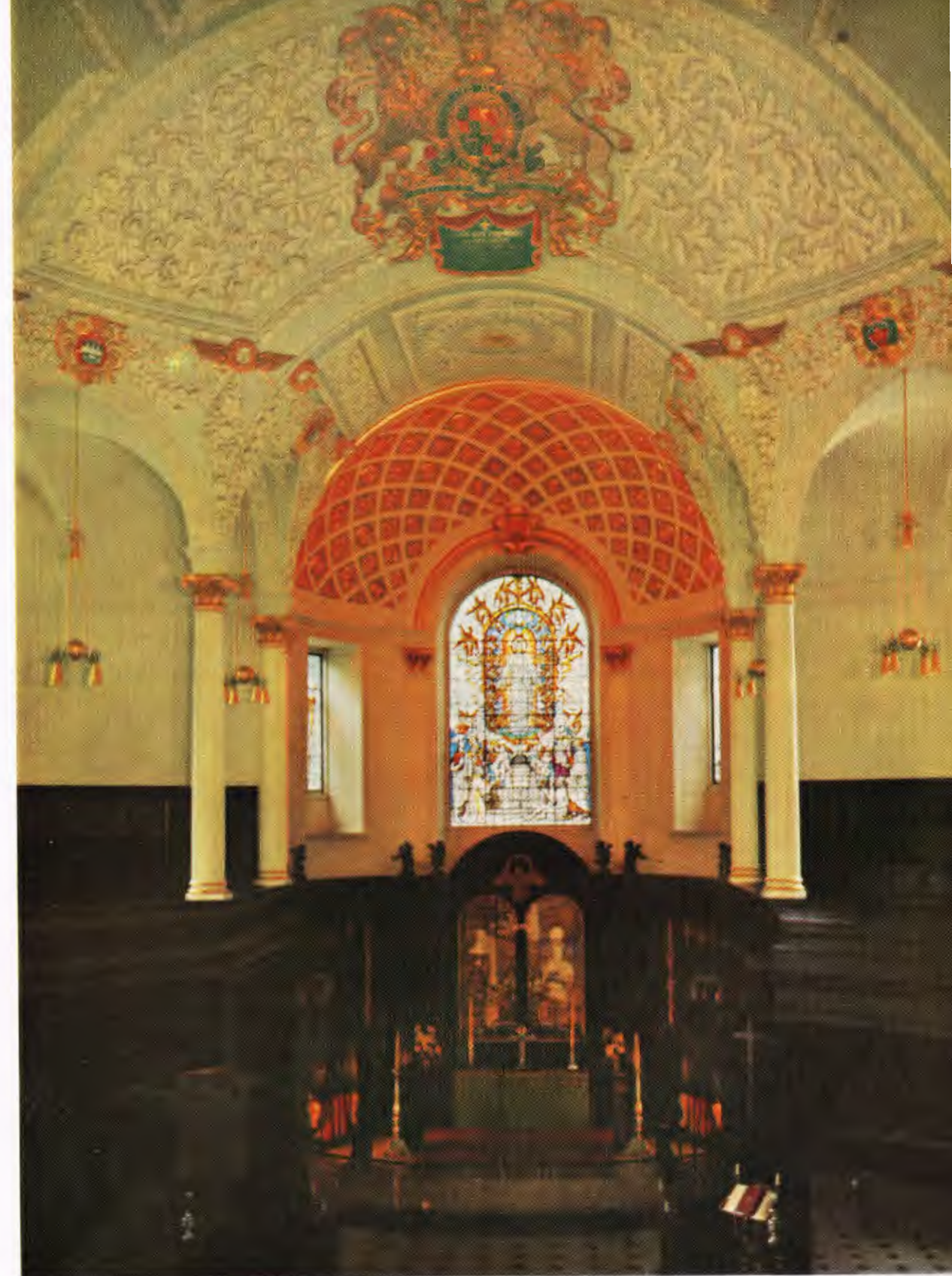




The new altar piece in the Wren church, St. Clement Danes, Fleet Street, London. This church, which was badly damaged in the blitz, is now the memorial church of the R.A.F. The altar piece was painted by Ruskin Spear on gold, the intention being to focus the eye on the coloured altar piece contrasting with the sombre tones of the dark oak panelling.



Another group of medieval minstrels in St. Mary's, Beverley. These figures are carved on the roof bosses. Other figures on the bosses, too inaccessible to be photographed, show a fox in a pulpit preaching to geese and a miller on his horse.



Another view of St. Clement Danes. The post-war restoration has departed from the traditional white of Wren churches, and the moulded decoration on the spacious vaulting is picked out in white against a background of blue-grey.





Two sixteenth-century monuments in York Minster. The use of coloured marble combined with skilful colouring is most effective, and like the colouring in Ripon Minster serves to relieve the sombre tones of the minster.



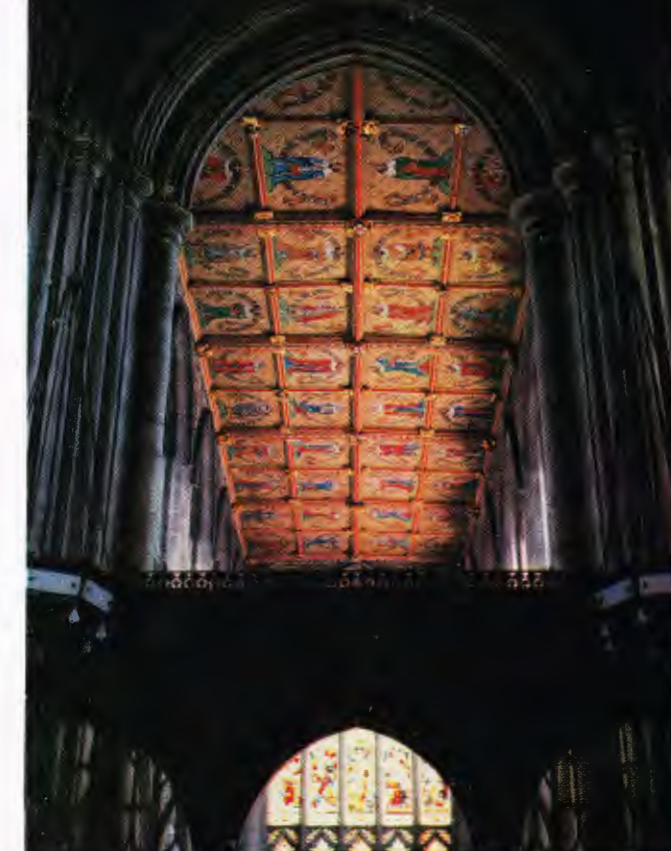
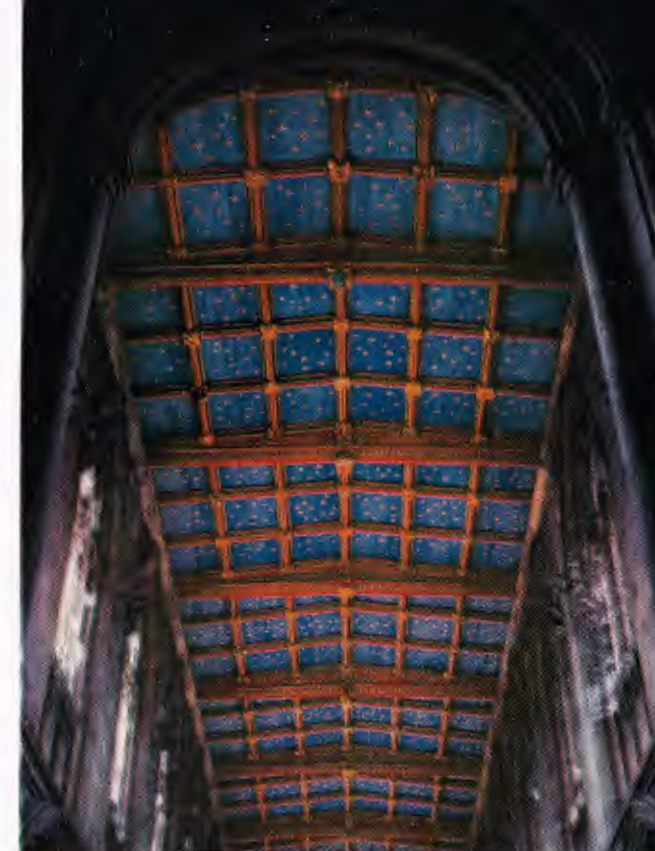
All the pictures reproduced were taken by two I.C.I. staff photographers of Fibres Division, Mr. A. F. Broughton and Mr. C. Hansard, who went to endless trouble to get them under natural conditions without special lighting.

Ripon Minster is a particularly happy example of the imaginative approach in church decoration. Until 1947 the thirty-two niches in the magnificent fifteenth-century choir screen were empty. In that year they were filled with figures, and it was decided that these figures and the groining above them should be gilded and coloured. The result is immensely successful, since the colours stand out in contrast to the dogmatic might of the Norman architecture and relieves the sombreness of its solid majesty.

St. Mary's, Beverley, is interesting as a church where the medieval decorations have been largely preserved in their original colours, although of course restored at various times. It is one of many parish

churches of urban England which benefited from the wealth and support of the town and of the local guilds.

St. Clement Danes was, of course, badly hit in the blitz, and the restoration was only completed just over a year ago.



The painted nave and chancel roofs in St. Mary's, Beverley. These roofs have been extensively restored, but the blue and gold motif in the decoration is traditionally medieval. The panels in the chancel roofing contain forty portraits of forty kings of England.



The high altar at Beverley Minster. This picture unfortunately does not do justice to the vivid gold background behind the figures. Much of this gold colouring has been lost in the photography and the blockmaking.



# THOMAS LAWRENCE HUNT

By Denzil Batchelor



THOMAS LAWRENCE HUNT, who has five amateur Caps as an England footballer, and over 50 representative games, three as captain, said to me: "As soon as you get a penny for playing, your sport ceases to be a sport." Then he added, "I would rather play a game with schoolboys than watch a Cup Final." I had not expected to hear anyone air these opinions in 1959: it was like breathing the air of what some call the Golden Age, when Olympic athletes took the oath without perjury and you found Old Carthusians beating Old Etonians in the F.A. Cup Final before a handful of spectators at the Oval.

And yet Lol Hunt—it has been "Lol" since childhood, though none knows why—is no wide-eyed visionary, but a practical chap who was out earning 10s. a week as soon as he left elementary school; who works today in I.C.I.'s Shipping Department in Liverpool, and played most of his football for the Marine Club, the only amateur side among the forty-two teams in the Lancashire County Combination.

Football has been his one game all his life. He learned to dribble on his way to Waterloo Secondary Modern school down back streets with a tennis ball bought out of the savings of months of pocket money. His father—an area manager with a Liverpool firm—died when he was 9, and life was stern from then on for the five children, all of whom have done excellently since, perhaps because things were never made easy for them. "There was no TV in my young days," says 33-year-old Lol. "If there had been, we couldn't have afforded it. We had to make our own amusements. It was football for me."

He was pretty good from the first, playing at inside right for the school senior team at the age of 12. After he had been a ship repairer's apprentice and a millwright the war broke out, and at 17 Lol volunteered for the Navy. He served in the Pacific theatre of war, and before he was demobilised as a Stoker Mechanic (First Class) had been in action in Weewak, Iwojima, Truk and Okinawa. He had managed to cram in some football in between: in Shanghai he had captained a Naval team representing two cruisers and two destroyers against a Chinese Nationalist side which ran them off their legs and won 3-2.

After that, with more than 3½ years' service behind him, it was peace and back to work—at the age of 21. The football side of his life (the really significant side) was spent in the white shirts and blue shorts of the Marine Club, one of the best teams in the north-west, so good that for a long time Lol Hunt couldn't get into the first XI. Every inch of his sixty-eight inches, every one of his one hundred and sixty-six pounds was thrown into the job of making and shooting goals at inside right. He was fast, he was a good shot with either foot; he tackled resolutely: but so far he was just a club player, and not in the first team at that.

And then one raw afternoon in 1949 came the news: the first team's left back couldn't get to the ground in time—his car had broken down. What about Lol Hunt taking his place? He had never played left back in his life before: for the rest of his playing career he was never to play anywhere else. The ball ran for him that day. It was true he had to curb himself from getting too far forward (and now and then he would have liked to have a crack at goal), but it was clear he had a sense of the tactical mission of defence. When the afternoon was over, his days in the second XI were over too.

Advancement followed soon enough. He was picked to play for the F.A. Amateur XI against the Nomads. One brilliant game here, and there was a good chance of an amateur cap; but it so happened that Lol chose the occasion to play the worst game of his life.

It might have been the end, but it wasn't. One Tuesday morning he was at his desk in the Liverpool office when the telephone rang. It was the Press Officer of the Marine Club. Did he know that he had been picked for England?

Of course he didn't believe it (he can still hardly believe it). When he was convinced it wasn't a leg-pull the first thing he did was ask his boss if he could go down on Friday to train with the team in London. He has never forgotten his boss's reaction. *On Friday?* Good heavens, why not now—straight away? I think it was the amateur in him that made him decline this generous offer, but he has never forgotten, nor will forget, the kindness and enthusiasm shown by everyone in the office, from the Shipping Manager to the youngest typist.

And so to Wembley, to take the place of the England captain at left back against Scotland before a crowd of 60,000. The queer thing was he wasn't in the least nervous beforehand, though when he had played for Marine in the Amateur Cup he had not had a wink of sleep on the Friday night.

Lol Hunt played a fine game, but Scotland beat England 4-1. It was a disappointing initiation, though a compensation was that he had made good his claim to a place in the side, and duly helped to beat Wales by two goals to one at Newport.

As a matter of fact, that defeat at Wembley was the only



time Lol was to taste this bitter fruit in international matches. In the following season he played the best game of his life when Ireland were beaten 5-0 at Crystal Palace; he took part in a drawn game against Scotland at Hampden Park; and helped to crown the season with 3-1 victory over Wales at Bournemouth. There was a crowd of 70,000 to watch the Scottish match at Hampden Park, where Lol Hunt found the turf less good than at Wembley but the accommodation for spectators unsurpassed.

Today, married and with two children, Lol Hunt surveys the contemporary scene as a reluctant spectator: "The hardest exercise I take now is pram-pushing, and I wish I had a shilling for every mile I've pushed." He agrees with Jimmy Hill, Fulham's captain, who remarked to me recently that the English team is picked by nine selectors, none of them ever a real footballer. He considers that in the amateur game there is a slight tendency to prefer southern players to northerners, and he thinks that those who appear in an Amateur Cup Final have a chance of being remembered by the selectors rather longer than their merits deserve.

And then he looks back. "It was wonderful," he says, "every minute of it, and I wouldn't exchange any of it for anything in the world—except, of course, for fatherhood and pram-pushing."



# OURSELVES AS OTHERS SEE US

Commentating at the time of the General Election on I.C.I.'s half-year trading results and higher profits, the "Wall Street Journal" published a lively and well-informed article from its London correspondent. The information contained in this article and the views expressed are, of course, not necessarily endorsed by reason of publication in the *Magazine*. However, readers may be interested in seeing for themselves the public image of I.C.I. as projected to the United States by an influential newspaper.

BY FRANK K. LINGE

Staff Reporter of THE WALL STREET JOURNAL

LONDON—That giant corporation, Imperial Chemical Industries, Ltd., disclosed a few days ago its first half net profits had jumped more than 48% from the year-earlier period. Sales were up, too, reaching the sterling equivalent of \$700 million. With an election afoot it was bound to be political as well as business news. How would the socialists of the Labor Party take it?

"Really big prosperity figures. Fine! Let us have an expanding industry everywhere," was the reaction trumpeted in 1.5 million copies of the party's organ, the Daily Herald.

At about the same moment Labor Party leader Hugh Gaitskell, electioneering in East Anglia, was asked by some chemical workers whether a socialist victory would bring nationalization of their plant.

"We have only plans for renationalizing two industries—steel and long-distance road hauling," he replied. "We have no plans for nationalizing Imperial Chemical or any other industry at the moment."

## Committed to Capitalism

To newsmen who have covered past elections in Britain all this is most intriguing and significant. It means that after a post-war period of vacillation the United Kingdom now seems solidly committed to capitalism as its dominant form of economic organization. Even the socialists no longer can afford to pose as true believers in straight socialism—not "at the moment" and perhaps never again.

The shift since their last election bid, the unsuccessful one of 1955, has been dramatic. Then Labor had a shopping list of industries to be freshly nationalized, from machine tools to aircraft. High on that list were huge "appropriate sections" of the chemical industry. Cried a party manifesto: "Chemicals are as vital to our economy as steel. Final decisions in this

vital industry are in the hands not of the community but of private individuals. This will not do."

What would not do for Laborites in 1955 will do very well in 1959. Why the change of heart? The surface answer is that any political party which seriously attempts to get elected must follow public opinion. And British opinion has swung strongly against new government ventures into industrial ownership. The Gallup Poll last February showed only one person out of eight wanted more nationalizing and even among voters who considered themselves firm Laborites fewer than one-third favored it.

## Nationalization's Problems

In digging deeper for factors shaping this popular sentiment, the most obvious is disillusionment with the actual performance of socialized coal mines, airlines, railroads, electricity and gas—all of which the Tories have kept under government ownership since they displaced the Laborites in 1951. Some have proved big money losers; British Overseas Airways Corp. suffered a deficit of about \$14 million in its latest fiscal year while the Coal Board has gone some \$78 million into the red since nationalization in 1947. And workers in these industries, who had expected to take command of them somehow and give themselves fancy pay rises, have been disappointed to find wage claims resisted by highly-paid professional executives on remote government boards.

Yet it appears certain that these negative feelings are not the whole story; there has been a positive upsurge of confidence in what private business has accomplished—and can accomplish—for the nation and its populace. A number of causes for this upswelling can be discerned; to analyze and illustrate them perhaps it is as well for this tale to continue as it began—with talk of Imperial Chemical.

Britons like that word "imperial." It conveys pride in England's traditional power

around the globe. The empire was once political but an Englishman knows he lives in an era when the last fragments of the political empire are being liquidated. He is not desperate about that but he is delighted to see many British business firms expanding their global roles—be they concerned with petroleum or toilet soap. In the chemical world, Imperial Chemical, second in size only to America's DuPont Co., is expanding with vigor.

Politically, Britain lost Ghana when it won independence in 1957. Economically, Imperial Chemical gained the African land last month when it completed an insecticide plant and began turning out Gammalin 20 for a mass assault on the capsid bugs which are ravaging millions of acres of cocoa plantations.

Politically, Britain lost the U.S. in 1776. Economically, Imperial Chemical is consolidating its position there by construction of a \$50 million synthetic fiber plant on a 215-acre tract near Shelby, N.C., in partnership with Celanese Corp. To be completed late next year, this plant is slated to turn out 40 million pounds a year of Teron, a polyester product I.C.I. has been making in Europe for a decade.

The current imperial conquests of Imperial Chemical include: Malaya, where a paint factory is rising; South Africa, where big sums are going into new facilities to make such diverse products as fertilizer and nylon zippers; Australia, where a plant making plastic film for food packaging is being enlarged; Canada, where a big I.C.I. subsidiary, Canadian Industries, Ltd., already operates 24 plants and where new polyethylene capacity is being added; India, where I.C.I. has gone into partnership with the Indian government in a venture that is beginning to produce nearly 5,000 tons of explosives yearly for use in heavy construction, and where another Imperial Chemical plastics plant has just been completed.

And it is not unnoticed that private business is proving able to plunge into lands which were never in Britain's political empire. Last year, for instance, I.C.I. acquired a majority interest in a Mexican paint manufacturing firm, Pinturas Servicio. Several days ago it announced plans to develop a new industrial site 200 miles north of Buenos Aires in Argentina to turn out sulphuric acid, carbon bisulphide and hydrogen peroxide.

In this sort of expansion Imperial Chemical is far from unique. Bowater Paper Corp., for example, has just moved into three European nations and New Zealand. It is doubtful whether any nationalized industry would be welcomed in such expansion abroad. India, for instance, would not relish partnership with the British Crown. Furthermore, a government-owned enterprise would face real difficulties in finding the money; Britain's taxpayers are in no mood for a further squeeze and the day is past when U.S. taxpayers can be expected to lend a helping hand.

Private business has been demonstrating it can raise cash rather painlessly. Imperial Chemical has thrown more than \$1 billion into plant building and modernization in the past

decade at home and abroad. In large part this has been done by ploughing back profits but there also have been trips to the capital markets. Some \$112 million was raised in London a couple of years ago by issuing stock; during 1958 and so far in 1959 nearly \$25 million has been raised in Australia by sale of stocks and notes.

## Buying by U.S. Investors

It is worth noting incidentally that a considerable flow of U.S. investment money has been going into I.C.I. stock as well as into numerous other British firms—notably during the past 12 months. The company insists it is unable to give a precise measurement of the volume but London market estimates put the current U.S. holding at a figure approaching 5% of the outstanding common stock, or \$75 million. Some of this was purchased directly on the London exchange; other stock is covered by depositary receipts issued in New York by Morgan Guaranty Trust Co. and traded on the American Stock Exchange.

Another technique of bringing American money and know-how into Imperial Chemical's Service was exemplified this year in a partnership transaction with Aluminum Co. of America. The two formed a new firm, Imperial Aluminum Co., Ltd., with I.C.I. contributing existing plants at Waunarlwydd in Wales and although no details have been announced officials say Alcoa "presumably" will make hefty contributions of cash.

Laborites who based their nationalization pleas of the last election largely on a claim that only the government would "expand home chemical production" have spent the past four years watching private companies throw up new plants in the United Kingdom without government aid. Monsanto Chemical, the Yankee company, for instance, has just brought into operation a 10,000-ton-a-year polyethylene plant near Southampton. But I.C.I. remains the most active in expansion; right now it is erecting Europe's first beryllium plant near Birmingham. The light and strong metal produced there is expected to be a competitor of aluminum for many industrial uses; its initial use will be in canning atomic fuel for advanced types of reactors.

## New Industrial Complex

By far the greatest proof of I.C.I. domestic expansionism is to be found at Wilton which a decade ago was empty Yorkshire grassland but today is a vast automated petrochemical complex on which over \$250 million has been spent, half of it since the last election. There are 10,000 jobs there today against 4,000 in 1955. With 600 acres of the 2,000-acre site thus far developed, construction continues apace.

This is more than a big building program; it represents a revolution in I.C.I. manufacturing concepts. At this one integrated site all of the corporation's 13 manufacturing divisions (each with its own board of directors) can build and operate—exchanging products cheaply and speedily and sharing such facilities as electric power and 180 million gallons daily of cooling water. This complex in turn is linked with an older facility, Billingham, largest



single chemical manufacturing unit in the British Commonwealth, by seven pipelines which travel 10 miles.

Planners have just completed schemes for creating a similarly fantastic set of plants alongside the River Severn in Gloucester in southwestern England. I.C.I. is prepared to throw \$280 million into this between now and the mid-1970's.

#### Yankee Competition

If I.C.I. and other big British businesses must be given credit for dispelling some of the standard socialist dogmas, so must Yankee companies. The old argument that Imperial Chemical is a "monopoly" loses some force with U.S. firms storming into the European chemical business, as into other fields. DuPont, which used to be a cozy spouse of I.C.I. in Canada—until Washington's trust busters insisted on a divorce—is becoming a fierce competitor, launching a synthetic rubber plant in Northern Ireland, a paint plant in Belgium, a synthetic fiber plant in Holland and a sales headquarters in Switzerland. With Union Carbide and Monsanto also producing in the United Kingdom, recent I.C.I. sales gains have been accomplished only by extensive price trimming—as the Laborite Daily Herald acknowledges happily.

All factors which now work against nationalization were, of course, present in 1955 and contributed to Labor's defeat then. But these factors have become so much more apparent in the past four years that the right wing of the Labor Party has fully recognized them and has established its dominance over the radicals who may still occasionally be heard.

For a sample of the latter you can still pick up a pamphlet put out by Bob Edwards, general secretary of the Chemical Workers Union, echoing Labor's old ideas. Here is the sort of thing it says:

"Without social ownership the British chemical industry will be squeezed out of world markets and its vitality, enterprise and initiative will be suffocated in the morass of vested interests and selfish profit hunting. With social ownership exports could be doubled and the pay of chemical workers increased by as much as 100%." . . .

Along with rising domestic production, a sense of well-being in Britain is sustained by more plentiful imports—bought with pounds that today are "strong" because exports are high. Far more than in the U.S., voters in this tight little island are aware of the vital role of trade and are inclined to give credit to firms which contribute. I.C.I., for example, shipped over \$207 million worth of goods from its United Kingdom factories alone last year, and sales by overseas operating companies brought the total to \$591 million.

#### I.C.I. Subsidiary's Trouble

Not all of this gross is gravy; I.C.I. like other far-flung British concerns, has its trouble spots. Nine years ago it bought a Rhode Island dyestuffs manufacturer, Arnold Hoffman & Co., and since then has poured money into modernizing its facilities—yet this U.S. subsidiary has been operating in the red until the last

few months. I.C.I. hopes the recovery of the U.S. textile industry will eventually produce some dividends.

Some "invisible" earnings of foreign exchange pour into Britain through the licensing of technology. A few weeks ago, for instance, I.C.I. agreed to let Engelhard Industries, Inc., a New Jersey firm make and sell platinum-titanium electrodes developed by the British company. These can be used for such diverse purposes as production of chlorine and protection of ship hulls against corrosion—and research men think they may be useful to de-salt sea water.

I.C.I. has myriad licensing pacts with foreign companies great and small. Its synthetic fiber development, Terylene, which is produced in the U.S. under the name of Dacron, for instance, is licensed by I.C.I. in such widely scattered lands as Japan and Germany. Since the war a host of plastics, drugs, dyestuffs and other products have poured out of I.C.I. labs; scientists continue to work on little-known chemicals—along with such odd metals as wrought forms of hafnium. Besides aiming at fresh discoveries they are pressing for cost-cutting techniques; I.C.I. has slashed titanium prices as much as 25% recently and is looking for new ways to make the metal cheaply enough so it can win new markets.

#### Appreciation of Public

Though only a few of its 12,000 products are sold direct to the consuming public, I.C.I. has shown skill in turning its science to projects the public can appreciate. A classic example: British roads are traditionally in chaos during the winter when they are heavily iced. The obvious answer was salt to melt the ice. But local authorities lacked the storage facilities; they rarely kept enough on hand. So I.C.I. devised a method of treating ground rock salt so it could be stored in the open even in wet weather. Now over 500 local governments buy I.C.I. salt, more than 25 times as many as five years ago.

By skill or casual coincidence many British business firms have set themselves objectives which the Labor Party can scarcely attack. For example, the Laborites are all for thawing out the cold war by increasing trade with the Soviet bloc. As it happens, I.C.I. already is conducting a trickle of such trade; it sold around \$5.6 million worth of plastics, dyestuffs and other wares to Russia and its satellites last year. "We are all in favor of promoting legitimate trade with the U.S.S.R.," says a company official and he thinks there is good chance of increasing it. "We recently had talks with Russian officials on a possible sale to them of our Terylene and polyethylene know how. They showed great interest."

An agreement has just been signed in Warsaw between I.C.I. and two Polish governmental enterprises, Polimer and Textilimport. Polimex is buying a license to produce synthetic fiber in a plant to start up in 1963. Meanwhile, during 1960-64 Textilimport will buy the same polyester fiber from I.C.I. to supply Poland's needs until the Polimex plant is running full blast.

## SIR ALEXANDER LOOKS AHEAD

In a recent address to the Institute of Directors, Sir Alexander Fleck, Chairman of I.C.I., spoke on the subject "Factory People and Ourselves." After stressing the importance of joint consultation and close co-operation with the trade unions, Sir Alexander looked into the future and envisaged the day when the present "arbitrary distinction" between staff and payroll would be removed.

*In the course of his address Sir Alexander said:*

WE are rightly reminded constantly these days of the changing pattern of society in the more highly industrialised countries. In the United States the salaried middle class of professional, technical and managerial people is now a larger group than that of the worker in overalls.

Over here there has been a rapid increase in the number of non-manual workers as a percentage of the total number of men and women employed. A bank has recorded that 16% of the new accounts opened since last year belong to customers who are wage-earners. In 1938 less than 4% of the population were paying income tax, while today 18% are in that happy position.

The effect of all this must be to blur and ultimately remove the arbitrary distinction that for so long has applied between "staff" and "payroll." I have long held that this distinction should ultimately go: think of the hypothetical case of two boys of the same age and mental ability, from the same school, and from the same social background.

One of them is offered an office job, and he is told that once he is a fully established member of the staff he will work for thirty-nine hours a week, get three weeks' holiday a year, and if he is ill will remain on full pay for at least some months. His salary will be considered annually, and when he retires he will receive a reasonable pension.

For the other fellow, who may be chosen as a process-man or fitter to look after intricate and valuable machinery, a very different picture is painted. He will work forty-two hours a week or more; if he is ill or late for work, his pay will be docked. His holidays may be shorter. He will reach full pay at 21 and thereafter such increases as he gets will depend not on his individual performance but on general wages levels throughout the country. At the end

of his working life he can look forward to a much less generous pension.

This is perhaps an exaggerated picture, and in some companies, due to improvements in hours, holidays, sickness benefits and also profit sharing, the distinction is very much narrower. Nevertheless I think it would be agreed that, underlying the modifications in details, the old pattern has not been fundamentally altered; and certainly the distinction, not so much of pay and benefits as of status and recognition, remains.

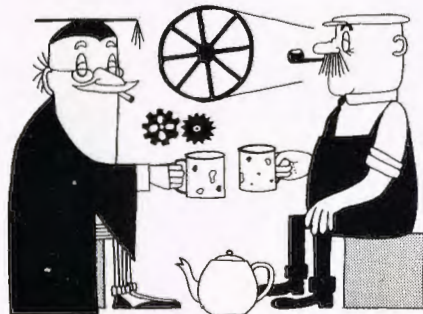
Looking into the future, and perhaps leaping even a decade or two, one would hazard a reasonable guess that this arbitrary distinction will vanish. Speaking personally, I can foresee an industrial society with a common pattern of employment conditions in which it will be difficult to distinguish between manual workers and office staff.

This is not to say that all employees will be subjected to the same conditions; indeed, one of the tests of industrial leadership, I believe, will be to ensure that no drab uniformity results but that individual merit and responsibility continue to be recognised by the right to more generous conditions as a man progresses in his career. This is a difficult problem, and in making changes one has to be careful not to get too far out of step with national conditions.

I have said ours is a changing society. It is changing socially and economically under the impact of new sciences and new technologies. If our policies are liberal and progressive we can be instrumental in smoothing the difficult transition period which every revolution brings with it. These revolutions are inevitable, but it is our particular task as Directors to see that, in spite of all temptations to do otherwise, factory people and ourselves get into line together and that we do not lose sight of the ultimate objective—to build an industry that will be to the benefit of all.



How did their six-week stint in industry measure up to expectations? The dons were enthusiastic. One of them, who went to Billingham, praised particularly the opportunities he was given for using such elaborate pieces of equipment as the mass spectrometer—



a chance, he said, he is unlikely ever to get at his college—and for work he was able to do on radio isotopes.

Teamwork in the laboratories “on a much larger scale than is usual in purely academic research” also came in for praise, as did the very co-operative attitude of the Division research teams they worked with.

### New Look for 1960

NEXT month the *Magazine* gets a face-lift. First of all we are planning a new and improved front cover. In future the colour photographs, many of them taken by I.C.I. people and often much admired, will cover the whole of the outside page.

Inside we are going over to a new type which we think will make the *Magazine* much easier to read.

Finally, we shall be starting a regular series of short commentaries on current economic and industrial topics having a bearing on the Company's activities. These are being written for us by Mark Abrams, an economist and director of research at the London Press Exchange, Britain's largest advertising agency.

### Road Safety Rally

A MAMMOTH road safety rally, probably the biggest of its kind ever held in Britain, took place at Wilton Works on the last Sunday in October. The rally, organised jointly by the Wilton Site safety committee and the Works motor club, was held over roads on the

Wilton estate. A camera unit from Tyne Tees Television covered the event.

All types of vehicles were eligible—cars, three-wheelers (including motor-cycle combinations and bubble cars), motor cycles, scooters, mopeds, push-bikes and just about every sort of commercial vehicle. Altogether there were 262 starters.

Of the hazards on the course the Wilton fire engine caused perhaps the most consternation and frustration as it careered round the site en route to an imaginary blaze.

The rally was over by tea-time, but the work of calculating the results, which one of the stewards feelingly described as a job worthy of an electronic computer, continued into the early hours of the morning. The top prizes in the five classes—private cars, motor cycles, commercial vehicles, three-wheelers and bicycles—went to **Mr. M. R. Ruane** (Fibres Division), **Mr. M. Evans** (a contractor's employee), **Mr. T. A. Smith** (Transport Department), **Mr. N. L. Davies** (Polythene Works) and **Mr. D. Robinson** (Wilton Training Centre).

**Mr. R. H. Hall**, Wilton Site safety officer, told our reporter afterwards: “It was a magnificent show. I was impressed by the amount of enthusiasm both on the part of the competitors and the marshals. The event is certainly worth repeating.”

### APPOINTMENTS

Some recent appointments in I.C.I. are: **I.C.I. (India):** Mr. W. P. Birtwhistle, Finance Director. **Dyestuffs Division:** Mr. G. W. Innes, Joint Managing Director (from 1st April 1960). **Pharmaceuticals Division:** Mr. J. G. Fisher, Commercial Managing Director (from 1st April 1960); Mr. S. Howard, Chairman (from 1st April 1960). **Fiber Industries Inc.:** Mr. K. Hewison-Smith, Director; Dr. P. T. Barrett (Technical Vice-President). **The Regions:** Mr. E. D. Carey, Manager, Northern Region (from 1st April 1960).

### OBITUARY

#### Dr. E. J. Holmyard

We regret to announce the death on 13th October of Dr. E. J. Holmyard. He was 68. *Dr. T. I. Williams writes:*

His many friends within I.C.I. will remember John Holmyard as the first editor of *Endeavour*, who firmly established its international reputation as an authoritative scientific review, and as joint editor of the five-volume *History of Technology*, of which the final volume appeared only a year ago. So unassuming was his disposi-

tion, however, that many may not know that this was only part of his contribution to learning and that he was already well known as a scholar before joining I.C.I. in 1941.

Holmyard was born in Somerset—which he always loved—in 1891, and went to Sexey's School, Bruton, and Sidney Sussex College, Cambridge. He quickly decided that his vocation was teaching. After brief appointments at Bristol Grammar School and Marlborough he was for twenty years head of the science department at Clifton College. There he not only established a notable school of science but wrote a series of textbooks, of quite a new kind, which greatly influenced science teaching not only in Britain but throughout the Commonwealth: there must be many scientists in I.C.I. who have used them. At the same time he developed his interest in the history of science, especially of alchemy; to read original Muslim texts he taught himself Arabic. He quickly established an international reputation for scholarship in this field, which led to the University of Bristol conferring its D.Litt. degree on him in 1928.

I knew Holmyard, over some twenty-five years, in three roles: first as schoolmaster at Clifton, then as a generous and unfailingly helpful friend, and finally as a colleague. As a teacher I owe much to him, as do all his former pupils: he combined a love of science with a deep respect for the rigour of its discipline. He was an outstanding example of the importance—to which the present shortage of science teachers is directing belated attention—of really inspiring teaching during the formative years. Later, when I worked with him on *Endeavour* and the “History,” I could not have asked for a more agreeable colleague. I look back gratefully on my long association with him, and wish I could have given as much as I received.

### ANSWERS TO CHRISTMAS QUIZ (p. 356)

**Who?** 1. Prince Philip. 2. (a) Mr. D. G. Logan—88, (b) Sir Winston Churchill. 3. (a) Pitt the Younger, (b) Cecil Rhodes, (c) Elizabeth I. 4. (a) John Masfield, (b) Sir Arthur Bliss. 5. Association Football teams. (a) The Canaries—Norwich City, (b) the Hatters—Luton Town, (c) the Bairns—Falkirk. **What?** 1. A legal fiction like the Chiltern Hundreds, which represents the only way an M.P. can resign his seat. 2. (a) A furious driver, (b) A small rodent of amazing jumping power, (c) A tale of woe, (d) A wine bottle, 8–12 times normal size, (e) A large branched candlestick used in churches. 3. (a) All are English cheeses, (b) All are Black's moves in chess, (c) All are type-faces, (d) All are Mah-jongg pieces. 4. James Baird, inventor of TV. 5. (a) Répondez s'il vous plaît, (b) Deo volente—God willing, (c) Quod erat demonstrandum—which had to be proved. **How?** 1. (a)  $C = \frac{5(F-32)}{9}$ ;  $F = \frac{9C}{5} + 32$ , (b)  $Km = 8M/5$  approximately. 2. 6080 ft. 3. (a) One mile, (b) One mile. 4. (a) 7d.—from its introduction in 1842 until 1855, (b) 10s. from 1941 to 1946. 5. (a) Through their skin, (b) Through their tongues. **When?** 1. (a) 1865—Earl Russell, (b) 1922—Lloyd George. 2. (a) 6th June 1944, (b) 9th May 1945, (c) 15th August 1945. 3. 72:99—expectation of years of life, reckoned at birth. 4. Cue-ball, in snooker. 5. Thursday, 26th March 1959—as Maundy money. **Which?** 1. (a) Alaska, from Russia, in 1867, (b) Louisiana, from France, in 1803. 2. The first strike after the chime. 3. (a) Bismuth, (b) Iodine, (c) Zinc. 4. Badminton—not played with a ball. 5. Either heads or tails—odds remain even. **Where?** 1. They are types of organ flutes. 2. They are shifting zones of equatorial calms between the trade winds. 3. (a) No. 11 Downing Street, London, (b) No. 10 Downing Street, London. 4. (a) Isle of Man—the legislature, (b) One branch of the Tynwald, (c) Legislature of the Channel Islands. 5. At Balaclava, Marshal Bosquet, of the charge of the Light Brigade.

### MODERN MECHANISED MINING

(continued from page 331)

the growing waste of manpower, in contemplation of many generations of reserves to be worked in the future. Even the present panel system is set out on a plan for the next 75 years. Yes, in mining we do look ahead a bit.

Thus, in 1943, the first report was written proposing that the mine transport system of 30 in. gauge rail tracks be scrapped and a trackless mining system be adopted, using independently powered vehicles on pneumatic tyres, operating on water-bound roads. Such a fundamental change of transport system of necessity involved a complete review of production methods. A diesel truck costs many thousands of pounds, and therefore for economic reasons has to be loaded quickly. So a machine that could load 14 tons on to a truck in a few minutes had to be found, and one that would raise the minimum of dust. For this job the powerful shovels used in quarries were of no use, since there would not be enough room to swing the bucket.

As there was no mine in Britain where a trackless mining system could be studied, I visited the United States in 1944 to report on what was being done in the limestone and other mines, where demand had led to some development of the class of equipment required.

All good things must come to an end, and when 1945 was no longer young and the Chairman's cables seemed to say, “When are you coming home?” I returned in a convoy with no more excitement than the dropping of a few depth charges on a lurking Jerry submarine when coming up the Irish Channel.

However, at that time a lone anhydrite mine had no place in the Schedule of Reserved Occupations other than among “clay holes” and “miscellaneous mineral workings.” It was not until 1947 that the Board of Trade relented so far as to grant an import licence for the first three half-track trucks, powered with 150 h.p. diesel engines. Getting H.M. Inspector of Mines to permit 150 h.p. diesel trucks to run round a mine was another story—just two years of persistent argument did the trick.

From then on progress was sure, if somewhat slow. Our engineers redesigned and strengthened the American stone loaders to enable them to stand up to three-shift duty in such a hard, strong rock as anhydrite. And they went to work on the problem of finding a cure for the dust stirred up by percussive drilling and are now developing electric rotary drilling.

Mining difficulties there were, too. The first trial panel ran into a section of anhydrite seam that inclined upwards steeper and steeper until an inclination of 1 in 4 was reached, which proved to be the limit for the trackless equipment. Marl rolls squeezed the anhydrite out from where it should have been, and even a lenticle of rock salt



Nursing staff at the Magadi Soda Co.'s African hospital in Kenya. In charge is the wife of Dr. T. H. White, the Magadi Medical Officer.

was run into in the middle of one seam—and do the chemists just hate salt with their anhydrite!

Today these development difficulties are, by and large, solved and a considerable peak of mechanical efficiency has been achieved.

But there is still heavy physical work to be done. Skilled and experienced miners are needed on the mine roofs, for, apart from providing a powered mobile platform to get the roof repairer up to his job, we still need to rely on the miner's sense of touch and sound when he taps the rock roof to judge whether it is safe or dangerous. If not safe, often hard work with plug, feather and hammer are required to make the roof secure; or it may be reinforced with roof bolts, 5½ ft. long and 1 in. diameter, set with a hydraulic pull-jack to a tension of 12 tons. Mining sense is something that cannot be obtained by capital expenditure, and no electronic gadgets have yet solved the problem of roof sounding.

Just as nature abhors a vacuum, so does Mother Earth abhor a hole being made in her bosom, and 20,000,000 tons extracted makes quite a hole! The miner must never relax his guard, or Mother Nature is liable to give him a back-hander when he is not looking.

And so this stuff the chemists call anhydrous calcium sulphate, which was precipitated on the floor of a warm saline-saturated sea 200 million years ago as a mud and has since shrunk from hundreds of feet in thickness to 18 feet or less, is now being brought to man's use for growing more food, when made into ammonium sulphate, or for making into sulphuric acid, as a third of it goes, which material has a place in the manufacture of practically everything we use today.



constables since dawn. As the morning proceeded, first one and then another had reported complete stagnation on every side. Eventually the Controller threw in his hand: his efforts had been all in vain, and he conceded victory to the motorists. The order went out to all constables to return to base for regrouping and (ominous phrase) "Pedestrian duties."

Meanwhile, the trapped motorists, for nearly an hour, were unaware of their plight. Long inured to hold-ups of forty minutes and more, they sat and waited. The traffic lights changed monotonously, the engines turned over remorselessly. Some drivers read newspapers, others worked up ulcers; the cloud of exhaust fumes grew thicker, fruitier and ever more choking. Even the pedestrians, accustomed as they were to overtaking lines of vehicles, took no notice of the congested ranks. But by 10.30 there was a vague uneasiness spreading: policemen could be seen abandoning their motorcycles and slipping furtively down the Underground. One or two pedestrians shouted rude remarks about brewing up mid-morning tea with radiator water, and a few renegade drivers even got out of their cars and began to stretch their legs—a definite breach of the stiff-upper-lip etiquette of traffic jams. Thereafter the rot set in rapidly: frenzied hooting, abuse, tears of rage and frustration—all these led up to the point where cars were actually abandoned.

The TV commentators later routed out a certain Mr. Edward Orfeo, a tough Rhodesian mining millionaire on a visit to London, who claimed fame as the first man ever to abandon a car in the middle of Piccadilly. Already at 9.50, according to his story, he deserted his hired Jaguar and phoned instructions to his garage to remove it. Photographs in the paper certainly show a cream Jaguar about ten yards to the north of Eros, and the barman at the Obongo Club confirms that Orfeo was soon busy drowning his troubles, after making the memorable comment, "If I can't use a Mark III Jag, I can sure use a treble rye."

Be that as it may, the news spread quickly in central London, and the first few abandoners of hope were soon joined by others. At first they walked bewildered up the line of traffic, trying to find some individual cause for their section of the jam—a broken-down steamroller, another State Visit, a platoon of Guards, ducks from St. James's Park. But frustration turned to consternation as the all-pervasiveness of the crisis became apparent. Cars, lorries,

buses and motor cycles were all trapped, mewed up like dodos in a corral, incapable of movement and ripe fodder for extinction—for scrap.

Meanwhile Fleet Street rapidly got on to the news and soon had the situation sized up in the banner headlines of the evening editions. In fact it was these editions, fed by train into the suburbs, that first brought the news to the benighted masses clotted in Swiss Cottage or coagulating down in Camberwell. "LONDON CAR SATURATION. GOLDEN CHANCE FOR MOTOR EXPORTS TO COMMONWEALTH." squealed the *Standard-Bearer*. "THE GREAT JAM," pronounced the *Evening Tidings*; "POLICE POWERLESS—MOTORISTS IN DESPAIR."

The repercussions of the catastrophe were immediate and sensational. By midday the hitherto never-ending throb of engines was stilled, the fumes ceased to rise from a myriad exhaust pipes, and with a light south-east breeze blowing Londoners got their first breath of fresh air for a decade. The editor of England's leading medical journal wrote a triumphant editorial: "Traffic constipation has brought new hope to five hundred thousand bronchial sufferers; a million ulcer cases are on the mend." In St. James's, sepulchral calm returned at long last to the club lounges. The London Road Safety Committee went into instant and thankful liquidation, and British Railways saw hope of coming out of the red with the sudden rush of extra passengers on to the trains. So much was sheer gain.

In other quarters, in contrast, there was near-panic. Oil industry executives, who early in the day had looked benignly from their office windows at the fumes of the countless gallons of petrol wasting in the street below, were white-faced and distraught by midday. Soon shots were heard in the Directors' corridor at the Mammoth Oil Building, while the oil shares tumbled relentlessly on the Stock Exchange. Motor company stock was being used as pipelights, but shoe shares were soaring.

Parliament was in turmoil. The Opposition Shadow Minister of Transport rose portentously at Question time. "Would the Right Hon. Member say what was the cost of the nearly completed Oxford Street flyover?" he asked. Clawing at the table for support, the Minister of Transport was ghastly pale. "Sixty million pounds," he gasped. "And the new Thames underpass link?" Another eighty million," croaked the Minister. His Opposition shadow was gleeful: "140 million pounds, gentlemen, all wasted

on futile palliatives: our motor car industry in ruins, mass hysteria and demoralisation in the motoring public." Clearly the Government was tottering to its doom.

Outside in the streets there were tragic scenes. Many car owners wept openly at the moment of parting with their cars: others in petulant rage turned on them and smashed them up: the more hard-headed were soon in contact with the scrap dealers, who appeared as if from nowhere, like vultures on the stricken field. Quick deals were made at knock-down prices and the sellers hurried off, glad to be rid of the problem of removing their former property from the streets. An enterprising scrap metal ship in the Pool of London moved right up to Tower Bridge and loaded cars direct into its hold. Fortunes were made in scrap, and at least a dozen new Cockney millionaires joined the ranks of surtax payers.

At last the Government acted—in the nick of time to save its life. The shambles had to be cleared, since obviously the London motorist was irretrievably

demoralised by the disaster. A great New Deal for pedestrians was proclaimed.

A ten-mile radius from Trafalgar Square was declared a carless zone. All roads and streets were used for the construction of silent high-speed horizontal escalators, air conditioned and housed in plate glass passageways. Road signs were removed, and the parking meters were sold to the Egyptians at an enormous loss. The Government paid compensation to everyone—motorists, manufacturers, and widows of suicides. The Oxford Street flyover became an amusement arcade and the scrap millionaires were given peerages. Finally, of course, all cars involved in the Great Jam were dragged away—all except for those in Shaftesbury Avenue. There it was found that the Jam had trapped one specimen of every make of car then known to exist. The cars were left as they stood and the street was sealed off. It was declared to be thenceforth a museum and a memorial to that awful day of doom when the last vehicle moved in London.

and Cummings of the "Daily Express" has the last word . . .



"Gentlemen, why not make them without engines, now they can't move anywhere!"





*"Gateway to the Dales"*

*Photo by W. L. Walker (Billingham Division)*